

L3191

S/065/62/000/012/004/005
E075/E135

11.9700

AUTHORS: Vipper, A.B., Kreyn, S.E., Bernshteyn, S.S., and
Lisovskaya, M.A.

TITLE: Investigation of the dispersing capacity of used oils
with detergent additives by the oil spot method

PERIODICAL: Khimiya i tekhnologiya topliv i masel, no.12, 1962,
50-55

TEXT: The method of oil spots (spreading of used oil drops on
a filter paper) was used to rate the dispersant properties of oils
MT-16 (MT-16) from Novokuybyshev refinery, containing additive
ИП-22К (IP-22K). Samples of the oils used in a single cylinder
diesel engine for 30 and 54 hours had the same dispersive capacity
at 20 °C, but at 150 °C the oil used for 54 hours had markedly
inferior dispersive properties. Oils MT-16 from Novokuybyshev and
Yaroslav refineries containing 6% of additive ВНИИ ИИ-360 (VNII
NP-360) had different dispersivities at 20 °C, but similar
dispersivities at 150 °C. The Novokuybyshev oil containing the
additive loses its dispersive properties with increasing temperature
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Investigation of the dispersing ...

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more rapidly than the Yaroslavl oil. It was established that differences in the response of the base oils to the same additive are largely due to resins which have strong dispersive activity at room temperature, but lose it at 100-200 °C. The resins produced in sulphurous Kuybyshev oil are the more efficient dispersants. Also the dispersive capacity of the more polar resin fractions, obtained by chromatography on silica gel, is higher than that of the less polar fractions. At temperatures above 100 °C the resins lose their effectiveness and the dispersive capacity of the two oils is mainly influenced by the additive. Thus the response of various base oils to detergent additives depends on the nature and quantity of resins accumulating in the oils during engine operation. There are 3 figures and 1 table.

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L 17528-63 EPF(c)/EWT(m)/BDS AFTTC/APGC Pr-4 DJ
ACCESSION NR: AP3004533 S/0065/63/000/008/0047/0049

AUTHORS: Vipper, A. B.; Kleymenova, Z. A.; Lisovskaya, M. A. 60

TITLE: Properties of ashless detergent additives^W of the polymeric type.

SOURCE: Khimiya i tekhnologiya topliv i masel, no. 8, 1963, 47-49.

TOPIC TAGS: IOA-564 detergent additive, zinc, barium, Zn, Ba

ABSTRACT: Authors studied the effectiveness of the polymeric type detergent additive IOA-564, produced by the Dupont corporation. It was found that the copolymeric additive does not exhibit any effect on the thermo-oxidation stability and deemulsifying ability of the oil tested. The corrosion aggressiveness of the oil is sharply increased. The effect of additive on the surface activity and detergent property of the oil is insignificant. The results confirm the benefits which can be obtained by using these ashless detergent additives of the polymeric type with a mixture of metal alkyl dithiophosphates. The effect of the copolymeric additive at a constant temperature is determined mainly by the high dispersion ability of this additive. The additive remains effective after the introduction of a small amount of water into the oil. In this case the addition of zinc or

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ACCESSION NR: AP3004533

barium dialkyldthiophosphate improves the additive. Orig. art. has: 1 table. 0

ASSOCIATION: none

SUBMITTED: 00

DATE ACQ: 27Aug63

ENCL: 00

SUB CODE: CH

NO REF SOV: 007

OTHER: 028

Card 2/2

LISOVSKAYA, M. P.

"The Pathology of Nasal Polyps." Cand Med Sci, Tomsk State
Medical Inst imeni V. M. Molotov, Tomsk, 1954. (KL, No 10, Mar 55)

SO: Sum. No. 670, 29 Sep 55--Survey of Scientific and Technical
Dissertations Defended at USSR Higher Educational Institutions (15)

LISOVSKAYA, M.P.

Model of a nasal plethysmograph for recording vascular reactions
of the human nasal mucosa. Vest. oto-rin. 18 no.1:58-59 Ja-F '56.
(MIRA 9:6)

1. Iz kafedry bolezney ukha, gorla i nosa (zav.-prof. A.G. Fetisov)
Tomskogo meditsinskogo instituta.
(ORRHINOLARYNGOLOGY, appar. and instruments
plethysmograph, nasal)

LISOVSKAYA, M.S.

124-11-12382

Translation from: Referativnyy Zhurnal, Mekhanika, 1957, Nr 11, p 8 (USSR)

AUTHOR: Lisovskaya, M. S.

TITLE: On the Trajectory of a Circumlunar Rocket. (O trayektoriyakh poleta rakety vokrug luny)

PERIODICAL: Byul. In-ta teor. astron. A N SSSR, 1957, 6; No. 8, pp 550-565 (German abstract).

ABSTRACT: The problem posed is the establishment of a rocket trajectory comprising a launching from Earth and an unpowered circumnavigation of the moon at a close range, followed by a return to Earth. The possibility of establishing such trajectories with any desired periselenic distance (minimal distance from the moon) is shown, provided that the velocity of the rocket relative to Earth is sufficiently great and opposite in sense to the velocity of the moon at the time of the approach of the rocket to the moon. A method for graphical integration, developed by the Author, is used in establishing five orbits having an axis of symmetry. These orbits pertain to two categories. The orbits of the first category describe two loops, one of which embraces the Earth, the other the moon. The orbits of the second category describe a single loop, embracing both the Earth and the moon.

G. A. Merman

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000930120006-0

Card 1/1

LISOVSKAYA, H. A.

Dissertation defended for the degree of Candidate of Philological Sciences
at the Institute of the Peoples of Asia

"The Conventional Period in the Modern Azerbaydzhan Language in Comparison
with Other Turkic Languages of the Southwest Group."

Vestnik Akad. Nauk, No. 4, 1963, pp 119-145

SHCHERBAKOV, I.M., dots., LISOVSKAYA, N.D., SOBOLEVA, T.I.

Etiopathogenetic treatment of psoriasis, lupus erythematosus, and
some other skin diseases presumably of viral origin. Trudy LMI
2:223-232 '55 (MIRA 11:8)

1. Kafedra kozhnykh bolezney (zav. - deystvitel'nyy chlen AMN SSSR
prof. O.N. Podvysotskaya) Pervogo Leningradskogo meditsinskogo
instituta imeni akademika I.P. Pavlova.
(SKIN--DISEASES)
(VIRUS--DISEASES)

LISOVSEAYA, N.D.

Some functions of the liver in acrodermatitis chronica atrophicans
[with summary in English]. Vest.derm. i ven. 32 no.2:3-7 Mr-~~Ap~~ '58.
(MIRA 11:4)

1. Iz Leningradskogo nauchno-issledovatel'skogo instituta antibioti-
kov (dir. A.V.Loginov)

(LIVER FUNCTION TESTS, in var. dis.
acrodermatitis chronica atrophicans (Rus))

(DERMATITIS, physiol.
liver funct. in acrodermatitis chronica atrophicans
(Rus))

LISOVSKAYA, N. D.: Master Med Sci (diss) -- "Material on the study of acroder-
~~matitis~~ matitis chronica atrophicans". Leningrad, 1959. 16 pp (State Order of Lenin
Inst for the Advanced Training of Physicians im S. M. Kirov), 200 copies (KL,
No 9, 1959, 117)

LISOVSKAYA, N.D.

Antitoxic function of the liver in acrodermatitis chronica
atrophicans during the treatment process with penicillin.
Eksp. i klin. issl. po antibiot. 1:413-417 '58. (MIRA 15:5)
(LIVER) (PENICILLIN) (SKIN--DISEASES)

LISOVSKAYA, N.D.

Further observations on the penicillin treatment of acrodermatitis
chronica atrophicans. Eksp. i Klin. issl. po antibiot. 1:418-423
'58. (MIRA 15:5)

(PENICILLIN)

(SKIN--DISEASES)

BALYASNIKOV, V.I.; LISOVSKAYA, N.D.

Materials on the combined treatment with antibiotics of pyodermatites.
Eksp. i klin. issl. po antibiot. 2:64-68 '60. (MIRA 15:5)
(SKIN--DISEASES) (ANTIBIOTICS)

NEKACHALOV, V.Ya.; MARGOLIN, A.M.; NIKITINA, T.A.; LISOVSKAYA, N.D.;
KHARENKO, V.I.; MAL'GINA, V.G.

Clinical manifestations of candidiasis observed in patients during
antibiotic treatment. Eksp. i klin. issl. po antibiot. 2:89-93
'60. (MIRA 15:5)

(MONILIASIS)

(ANTIBIOTICS—TOXICOLOGY)

KHAVKIN, Yu.A.; SULEYMANIAN, M.S.; LISOVSKAYA, N.D.

Immunogenicity of adsorbed diphtheria anatoxin depending on the titer of the original natural anatoxin and the degree of its purification. Trudy TashNIIVS 6:21-25 '61. (MIRA 15:11)
(DIPHTHERIA ANTITOXIN)

LISOVSKAYA, N.D.

Bacterial contamination and the pyrogenic properties of antitoxic antidiphtheria sera in the process of preparing them by means of the "Diaferm-III" of the Institute of Experimental Medicine of the Academy of Medical Sciences of the U.S.S.R. Trudy TashNIIVS 6:75-81 '61. (MIRA 15:11)

(DIPHTHERIA ANTITOXIN)

LISOVSKAYA, N.D.

Species composition of the microflora polluting the serum in the process of its preparation by means of the "Diaferm-III" and the pyrogenic activity of various micro-organisms; report No. 2.

Trudy TashNIIVS 6:83-88 '61.

(MIRA 15:11)

(DIPHThERIA ANTITOXIN)

LISOVSKAYA, N.D.

Development of pyrogenic properties in bacterially contaminated sera depending on the temperature regime. Trudy TashNIIVS 6:89-92 '61.

(SERUM)

(MIRA 15:11)

LISOVSKAYA, N.D.

Quantity of microbial bodies in and the pyrogenic properties of
protein and proteinless substrates. Trudy TashNIIVS 6:93-98 '61.
(MIRA 15:11)

(PROTEINS)
(BACTERIOLOGY--CULTURES AND CULTURE MEDIA)

LISOVSKAYA, N.D., kand.med.nauk; ALEKSEYEVA, V.G.; MUKHINA, L.D.

Adie syndrome. Vest. dermat. i ven. 38 no.9:71-73 S '64.

(MIRA 18:4)

1. Leningradskaya dermatologicheskaya bol'nitsa (glavnyy vrach
S.I.Brodskiy).

GUR'YEV, A.N., kand.med.nauk; LISOVSKAYA, N.D., kand.med.nauk; SKRIPKIN, Yu.K.;
SOMOV, B.A.; GOL'DBERG, D.M.; LEBEDEV, B.M.

New drugs. Vest. dermat. i ven. 38 no.9:78-79 S '64.

(MIRA 18:4)

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CIA-RDP86-00513R000930120006-0"

ZHEBROVSKIY, V.V.; LISOVSKAYA, N.M.; PARKHOMOVSKAYA, A.D.

Lacquers with a base of epoxy resins modified by phenol-
formaldehyde resins. Lakokras. mat. i ikh prim. no.4:2-4 '63.
(MIRA 16:10)

LISOVSKAYA, N.N.
ROMINSKIY, I.R.; LISOVSKAYA, N.N.

Oxidation of inulin by iodic acid. Ukr. khim. zhur. 23 no.6:
741-744 '57. (MIRA 11:1)

1. Institut organicheskoy khimii AN USSR.
(Inulin) (Iodic acid) (Oxidation)

AUTHORS: Rozum, Yu., S., Lisovskaya, N. H. SOV/79-29-1-48/74

TITLE: Quaternary Salts of the N-Monoxides of Derivatives of Phenazine and Quinoxaline (Chetvertichnyye soli N-monookisey proizvodnykh fenazina i khinoksalina)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 1, pp 228 - 234 (USSR)

ABSTRACT: Phenazine, quinoxaline and their derivatives form N-monoxides and N,N-dioxides with peracids like the tertiary amines, pyridine and quinoline. In reactions with alkyl halides or dialkyl sulfates they give quaternary salts, which have not been synthesized and investigated before. The article describes the syntheses of the quaternary salts of the N-monoxides of phenazine, quinoxaline and some of their derivatives, as well as the properties of such salts. Heating the monoxides of phenazines or their alpha- and beta substitution products in a nitrobenzene solution containing a slight surplus of neutral dimethyl sulfate gives the corresponding quaternary salts (Diagram 1). Quinoxaline derivatives show a similar reaction. These salts of the N-oxides form at 115-130°C. within a short time. The completion of the reaction can easily

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Quaternary Salts of the N-Monoxides of Derivatives of Phenazine and Quinoxaline

SOV/79-29-1-48/74

be determined: The oxides are yellow in color and insoluble in water whereas the salts have a red color and a different crystal shape and are soluble in water. The quaternary salts of the N-oxides of phenazine and quinoxaline can easily be purified and have stable melting points. Their crystals are similar in color to those of the N,N-dioxide of phenazine, probably owing to a certain analogy in molecular structure (Diagram 2). The quaternary salts of the N-oxides of phenazine are caused to react with potassium ferrocyanide in alkaline solutions to form the phenazinones of red and violet color (Diagram 3). Thus, new syntheses have been provided for 12 quaternary salts of the N-oxides of phenazine and quinoxaline (Tables 1 and 2). There are 2 tables and 6 references, 2 of which are Soviet.

ASSOCIATION: Institut organicheskoy khimii Akademii nauk Ukrainskoy SSR (Institute for Organic Chemistry of the Academy of Sciences, Ukr SSR)

SUBMITTED: October 30, 1957

SHAPOSHNIKOVA, Z.E.; LISOVSKAYA, N.N.; ALEKSEYEVA, I.V.; ROMINSKIY, I.R.

Syntheses of tosyl esters of lactose and lactulose. Ukr.khim.zhur.
28 no.7:858-860 1962. (MIRA 15:12)

1. Institut organicheskoy khimii AN UkrSSR.
(Lactose) (Lactulase) (Toluenesulfonic acid)

ROMINSKIY, I.R.; SHAPOSHNIKOVA, Z.B.; LISOVSKAYA, N.N.;
ALEKSEYEVA, I.V.

Structure of tosyl derivatives of lactose and lactulose.
Ukr. khim. zhur. 29 no.4:420-423 '63. (MIRA 16:6)

1. Institut organicheskoy khimii AN UkrSSR.
(Lactose) (Lactulose)
(Toluenesulfonic acid)

LIVANOVA, N.B.; LISOVSKAYA, N.P.; SILONOVA, G.V.

Study of the mechanism of activating action of adenylic acid
on the phosphorylase B in rabbit muscles. Biokhimiia 29 no.5:
936-944 J1-Ag '64. (MIRA 18:11)

1. Institut biokhimi imeni Bakha AN SSSR, Moskva.

LISOVSKAYA, N.P.; LIVANOVA, N.B.; SILONOVA, G.V.

Mechanism of the action of muscle phosphorylase B. *Biokhimiya*,
29 no.6:1012-1019 N-D '63 (MIRA 1963)

I. Institut biokhimi i imeni A.N.Bakha AN SSSR, Moskva. *Biokhimiya*
December 31, 1963.

LISOVSKAYA, N.P. (Moskva)

Serine as the element of the active center in some enzymes. Usp.
sovr.biol. 54 no.1:25-43 J1-Ag '62. (MIRA 15:11)
(SERINE) (ENZYMES)

VENKSTERN, T.V.; LISOVSKAYA, N.P.; MALKOVA, M.G.; KOSAREVA, Ye.A.;
SISAKYAN, N.M., akademik, glav. red.; BAYEV, A.A., zam.
glav. red.; VETROVA, I.B., red. izd-va; DOROKHINA, I.N.,
tekh. red.

[Summaries of the sectional reports; sections 1 to 13] Referaty
seksionnykh soobshchenii; seksii 1 - 13. Moskva, Izd-vo Akad. nauk SSSR, 1962. 591 p. (Its: Trudy) (MIRA 16:5)

1. International Congress of Biochemistry. 5th, Moscow, 1961.
(BIOCHEMISTRY--CONGRESSES)

VENKSTERN, T.N.; LISOVSKAYA, N.P.; MALKOVA, M.G.; KOSAREVA, Ye.A.;
SISAKYAN, N.M., akademik, glav. red.; BAYEV, A.A., zam. glav.
red.; VETROVA, I.B., red. izd-va; GUSEVA, A.P., tekhn. red.

[Transactions of the Fifth International Congress of Biochemistry]
Trudy V Mezhdunarodnogo biokhimicheskogo kongressa. Moskva, Izd-vo
Akad. nauk SSSR. [Vol.11. Sectional reports; sections 14-28] Refe-
raty sektionnykh soobshchenii; sektionii 14-28. 1962. 581 p.

(MIRA 15:10)

1. International Congress of Biochemistry. 5th, Moscow, 1961.
(BIOCHEMISTRY--CONGRESSES)

LISOVSKAYA, N.P.; IVANOVA, G.V.; LIVANOVA, N.B.

Change in the phosphorus fractions during the acid hydrolysis of
casein. Biokhimiia 27 no.3:407-411 My-Je '62. (MIRA 15:8)

1. Institute of Biochemistry, Academy of Sciences of the U.S.S.R,
Moscow.

(HYDROLYSIS) (PHOSPHORUS) (CASEIN)

IVANOVA, G.V.; LISOVSKAYA, N.P.

Use of Soviet brand ion exchangers for producing glucose-1-phosphate. Vop. med. khim. 7 no.3:320-323 My-Je '61. (MIRA 15:3)

1. Institut biokhimi imeni A.N. Bakha AN SSSR, Moskva.
(ION EXCHANGE)
(GLUCOPHOSPHORIC ACIDS)

SILONOVA, G.V.; LISOVSKAYA, N.P.; LIVANOVA, N.B.

Vacuum-evaporation apparatus for rapid concentration of liquids.
Vop. med. khim. 10 no.4:434-435 J1-Ag '64. (MIRA 18:4)

1. Institut biokhimi imeni Bakha AN SSSR, Moskva.

APR 1965 AF5019801

HR/0011 45/010/004/0699/0701
5/1/65

AUTHOR: Tashmukhamedov, B. A.; Lisovskaya, N. P.

Participation of phosphoproteins in active transport of ions in sections of rat cerebral cortex

SOURCE: Biofizika, v. 10, no. 4, 1965, 699-701

KEY TAGS: phosphorus, ion source, protein, biologic metabolism, radioisotope

ABSTRACT: Two series of experiments were performed to study the rate of exchange of phosphorus in phosphoproteins in sections of rat cerebral cortex under different operating conditions of the ion pump. Varying degrees of activation or inhibition of the pump were achieved by changing the concentration of potassium ions in the perfusion medium. The rate of exchange of phosphorus in phosphoproteins was found to be dependent on the rate of active transport of ions.

APSO18801

if there was only passive ion diffusion through the membrane, the product

of the rate of incorporation and the concentration of the substrate

should be constant.

It is found that

the rate of incorporation

is proportional to

the concentration of the substrate

and the rate of incorporation

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and the rate of incorporation

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LISOVSKAYA, N.P.; TASHMUKHAMEDOV, B.A.

Connection between "transport" adenosinetriphosphatase and phospho-
protein metabolism in the cortical cells of rabbits. Dokl. AN SSSR
163 no.6:1503-1506 Ag '65. (MIRA 18:8)

1. Institut biokhimi im. A.N.Bakha AN SSSR. Submitted October
21, 1964.

LISOVENKO, A.T.; MIKHELEV, A.A.

Automatic setup for the simultaneous recording of weight and temperature [with summary in English]. Inzh.-fiz. zhur. 4 no.9: 98-101 S '61. (MIRA 14:8)

1. Tekhnologicheskij institut pishchevoy promyshlennosti, g. Kiyev.

(Recording instruments)

SIMIRENKO, Lev Platonovich [deceased]; SHEPEL'SKIY, A.I., kand. sel'-khoz. nauk, glav. red.; KOVTUN, I.M., kand. sel'khoz. nauk, zam. glav. red.; POSTYUK, A.V., zam. glav. red.; RODIONOV, A.P., doktor biol. nauk, zam. glav. red.; DEM'YANETS, Ye.F., starshiy nauchnyy sotr., red. toma; LISOVENKO, L.T., kand. biol. nauk, nauchnyy sotr., red. toma; NIKONENKO, M.N., kand. biol. nauk, red. toma; POSTOYUK, A.V., red.; DEREVYANKO, G.S., tekhn. red.

[Pomology in three volumes; apple, pear, stone fruits] Pomologia v trekh tomakh; iablonia, grusha, kostochkovye porody. Kiev, Izd-vo Ukrainskoi Akad. sel'khoz. nauk. Vol.1. [Apple] IAbлонia. 1961. 578 p. (MIRA 15:2)

1. Ukrainskiy nauchno-issledovatel'skiy institut sadovodstva (for Dem'yanets, Lisovenko).

(Apple--Varieties)

YEMEL'YANOVA, N.A. [translator]; KOZHEVNIKOVA, Ye.V. [translator];
LISOVSKAYA, O.V. [translator]; SHIKEDANTS, M.P. [translator];
DUMIN, M.S., doktor sel'skokhozyaystvennykh nauk, prof., red.;
FOL'KMAN, Ye.N., red.; GERASIMOVA, Ye.S., tekhn.red.

[Plant diseases; yearbook of the U.S.Department of agriculture.
Translated from the English] Bolezni rastenii; ezhegodnik
Ministerstva zemledeliia SShA. Obshchaia red.i vstup. stat'ia
M.S.Dunina. Moskva, Izd-vo inostr. lit-ry, 1956. 913 p.
(MIRA 11:5)

1. U.S.Dept. of agriculture.
(Plant diseases)

LYSENKO, T.D.; OL'SHANSKIY, M.A.; SINYAGIN, I.I.; GLUSHCHENKO, I.Ye.;
VARJUNTSYAN, I.S.; PREZENT, I.I.; SHCHERBINOVSKIY, N.S.; SHUMKOV,
V.I.; YEVSTIGNEYEV, S.H.; BOCHEVER, A.M.; LITVIN, V.M.; YAYKOVA,
A.T.; PODVOYSKIY, I.I.; SAKS, Ye.I.; KHALIFMAN, I.A.; FEYGINSON,
N.I.; SHCHEGLOVA, Yu.N.; DLUGACH, G.V.; STERNIN, R.A.; LISOVSKAYA,
O.V.; GUBINA, T.I.; ROZENFEL'D, M.I.; TSVETAYEVA, Ye.M.; PARKHO-
MENKO, Ye.V.; NEYMAN, N.F.

Sofia Iakovlevna Voitinskaja; an obituary. Agrobiologiya no.4:121
Jl-Ag '58. (MIRA 11:9)
(Voitinskaja, Sofi'ia Iakovlevna, 1898-1958)

YEMEL'YANOVA, N.A. [translator]; LISOVSKAYA, O.V. [translator]; GUNAR, I.I.,
red.

[Chemical control of weeds] Khimicheskaya bor'ba s sorniakami. Pod
red. i s predisl. I.I.Gunara. Moskva, Izd-vo inostr. lit-ry, 1959.
226 p. (MIRA 14:10)

1. British Weed Control Council. (Weed control) (Herbicides)

DESAI, M.K.; BHIDE, V.P. (Indiya); LISOVSKAYA, O.V. [translator]

Controlling cotton diseases by developing disease resistant varieties. Agrobiologiya no.2:184-187 Mr-Apr '59.
(MIRA 12:6)

1. Sel'skokhozyaystvennyy kolledzh, laboratoriya fitopatologii, Puna.

(Cotton--Disease and pest resistance)

DATTA, A.N.; SAN'YAL, P. (Indiya); LISOVSKAYA, O.V. [translator]

Studies on the seeding rate of ambary hemp. Agrobiologiya no.4:
632-634 JI-Ag '59. (MIRA 12:10)

1. Nauchno-issledovatel'skiy institut dzhuta, Barrakpur, Zapadnaya
Bengaliya.

(Ambary hemp)

STRUN, M. [Stroun, M.](Shveytsariya); MATON, K. Sh. [Mathon, C. C.](Frantsiya)
LISOVSKAYA, O.V. [translator)

Induced mutation of potato eyes. Agrobiologia no.2:189-192
Mr-Apr '61. (MIRA 14:3)
(Potatoes)

SHTEYNBRENER, K. [Steinbrenner, K.]; NAGLICH, Fr. [Naglitsch, Fr.];
SHLIHT, I. [Schlicht, I.] (Germanskaya Demokraticeskaya
Respublika); LISOVSKAYA, O.V. [translator]

Effect of the herbicides simazine and V-6658 on soil micro-
organisms and soil fauna. Agrobiologiya no.6:827-841 N-D '61.
(MIRA 15:2)

1. Institut polevodstva i rasteniyevodstva, g. Myukhenberg.
(Herbicides)
(Soil micro-organisms)

DYUSARD'YE, R., inzhener-agronom (Frantsiya); LISOVSKAYA, O.V. [translator]

History of the development of the La Charmoise sheep in France.
Agrobiologiya no.4:577-583 Jl-Ag '62. (MIRA 15:9)
(FRANCE--SHEEP BREEDS)

BUATO, P. [Boiteau, P.] (Frantsiya, Parizh); LISOVSKAYA, O.V. [translator]

Estrogenic activity of various feeds and its importance in
zootecnics; from the work of the Laboratory of Nutrition at the
Institut of Applied Research. Agrobiologiya no.1:92-100 Ja-F
'63. (MIRA 16:5)

(Feeds)

(Estrcgens)

ELLIOTT, Fred Craig (1916-); VOLOTOV, Ye.N. [translator];
YEMEL'YANOVA, N.A. [translator]; LISOVSKAYA, O.V.
[translator]; ZHEBRAK, A.R., red.

[Plant breeding and cytogenetics] Seleksiia rastenii i
tsitogenetika. Pod red. i s predisl. A.R.Zhebraka. Mo-
skva, Izd-vo inostr. lit-ry, 1961. 447 p.

(MIRA 16:4)

(Plant breeding)

BUI GUI DAP (Demokraticeskaya Respublika V'yetnam); LISOVSKAYA, O. V.
[translator]

Behavior of peanut plants in hill planting. Agrobiologia no.5:698-
702 S-0 '60. (MIRA 13:10)

1. Institut zemledeliya i lesovodstva, Khanoy.
(Peanuts)

LISOVSKAYA, R.A.

Hemangioma of the skull. Vest. rent. i rad. 39 no.4:42-45 J1-Ag '64.
(MIRA 13:7)

1. Rentgeno-radiologicheskoye otdeleniye (zav. - prof. M.D.Gal'perin)
Nauchno-issledovatel'skogo psikhonevrologicheskogo instituta imeni
V.M.Bekhtereva, Leningrad.

GROMOV, S.A.; LISOVSKAYA, R.A.

~~Effect of subarachnoidal introduction of oxygen on the content~~
of ascorbic acid in the liquor. Trudy Gos. nauch.-issl. psikh-
nevr. inst. 31:267-270 '63. (MIRA 17:6)

LISOVSKAYA, R.A.

X-ray diagnosis of spinal hemangiomas. Trudy Gos. nauch.-issl.
psikhonevr. inst. 31:364-374 '63. (MIRA 17:6)

NOVIKOV, I.I.; ZOLOTOREVSKIY, V.S.; LISOVSKAYA, T.D.

Temperature range for the formation and propagation of
crystallization cracks in aluminum alloys and the criteria of
hot shortness. Issl. splav. tsvet. met. no.4:130-140 '63.

(MIRA 16:8)

(Aluminum alloys--Brittleness)
(Thermal stresses)

L 00084-66 EWT(m)/EWP(w)/EPF(n)-2/EWA(d)/T/EWP(t)/EWP(z)/EWP(b)/EWA(c)
ACCESSION NR: AP5022343 IJP(c) MJW/JD/ UR/0149/85/000/003/0138/0144
WW/HW/JG 869.715

AUTHOR: Zakharov, M. V.; Lisovskaya, T. D.

TITLE: Effect of various elements on the electric conductivity, hardness and recrystallization temperature of type AV000 aluminum

SOURCE: IVUZ. Tsvetnaya metallurgiya, no. 3, 1965, 136-144

TOPIC TAGS: electric conductivity, hardness, recrystallization temperature, aluminum, binary alloy, aluminum alloy/AV000 aluminum

ABSTRACT: About 60 binary alloys were prepared of aluminum with various alloying elements, each represented in at least three of the alloys. Results showed that additions of the following elements in amounts of 0.1-0.2 wt. % lead to a slight decrease in electric conductivity: zinc, nickel, silicon, copper, molybdenum, calcium, iron, silver, magnesium, and tungsten. The following lower electric conductivity strongly: chromium, lithium, manganese, titanium, beryllium, and zirconium. In concentrations of 0.1-0.2 atom %, the following additives lower the electric conductivity slightly: zinc, magnesium, nickel, sili-

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L 00084-66

ACCESSION NR: AP5022343

19

con, molybdenum, calcium, copper, iron, beryllium, and silver. The following lower it strongly: chromium, manganese, zirconium, titanium, and tungsten. The best results in hardening annealed aluminum were produced by additions of the following: iron, manganese, tungsten, magnesium, copper, nickel, titanium, calcium, zirconium, chromium, and molybdenum. Additions of bismuth, antimony, tin, cadmium, silver, and zinc increase the hardness of aluminum only slightly. A positive effect on the long term hardness of aluminum at 200 C was shown by additions of magnesium, zirconium, tungsten, copper, titanium, beryllium, manganese, molybdenum, iron and manganese. In general, promising additives are considered to be the following: iron (up to 0.4 wt. %), copper (0.4-0.6%), manganese (0.2-0.6%), silicon (0.1-0.2%), zirconium (0.05-0.1%), titanium (0.05-0.1%), tungsten (0.05-0.15%), molybdenum (0.15-0.25%), and beryllium (0.008-0.05%). Orig. art. has: 3 figures and 3 tables

ASSOCIATION: Moskovskiy institut stali i splavov. Kafedra metallovedeniya tsvetnykh, redkikh i radioaktivnykh metallov (Moscow Institute for Steel and Alloys. Department for the Metallurgy of Nonferrous, Rare, and Radioactive

Metals) 44,55

SUBMITTED: 18Jun64

NR REF SOV: 006

ENCL: 00

SUB CODE: MM

OTHER: 010

Card 2/2 PR

L 29424-66 EWT(m)/EWP(t)/STI IJP(e) JD

ACC NR: AP6017979 (A) SOURCE CODE: UR/0413/66/000/010/0081/0081

INVENTOR: Zakharov, M. V.; Lisovskaya, T. D. 27

ORG: none

TITLE: Aluminum-base conductor alloy. Class 40, No. 181817

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 10, 1966, 81

TOPIC TAGS: aluminum alloy, magnesium containing alloy, zirconium containing alloy, copper containing alloy, silicon containing alloy, iron containing alloy, conductor alloy

ABSTRACT: This Author Certificate introduces an aluminum-base alloy with improved mechanical properties and high electrical conductivity containing 0.4—0.6% magnesium, 0.15—0.25% silicon, 0.4—0.6% iron, 0.1—0.15% zirconium, and 0.4—0.6% copper. [AZ]

SUB CODE: 11/ SUBM DATE: 08Oct64/ ATD PRESS: 5010

Card/ 1/1 fv

UDC: 669.715.018.5

ACC NR: AP6035882

SOURCE CODE: UR/0413/66/000/020/0123/0123

INVENTOR: Zakharov, M. V.; Lisovskaya, T. D.

ORG: none

TITLE: High conductivity heat-resistant aluminum-base alloy. Class 40, No. 187310

SOURCE: Izobreneniya, promyshlennyye obraztsy, tovarnyye znaki, no. 20, 1966, 123

TOPIC TAGS: aluminum magnesium, silicon alloy, iron containing alloy, copper containing alloy, beryllium containing alloy, high conductivity aluminum alloy, heat resistant aluminum alloy

ABSTRACT: This Author Certificate introduces a high-conductivity heat-resistant aluminum-base alloy containing magnesium, silicon, iron, and copper. To improve mechanical properties and ensure high electric conductivity, the alloy has following chemical composition: 0.4—0.6% magnesium, 0.15—0.25% silicon, 0.4—0.6% iron, 0.4—0.6% copper, and 0.03—0.05% beryllium.

SUB CODE: 11/ SUBM DATE: 03May65/ ATD PRESS: 5108

Card 1/1

UDC: 669.715.018.5

LISOVSKAYA, V.I. [Lisovs'ka, V.I.]

Study of the lipid metabolism in the horse mackerel *Trachurus mediterraneus ponticus* Aleev of the northwestern part of the Black Sea. *Nauk.zap.Od.biol.sta.* no.5:55-62 '64.

(MIRA 18:1)

LISOVSKAYA, Yevdakiya

The fibrous, golden flax. Rab. i sial. 31 no.10:13-14 0'55.
(White Russia--Flax) (MIRA 8:12)

LISOVSKAYA, V.D.

Excercise therapy for contracture patients. Vrach.delo no.12:
123-124 D '62. (MIRA 15:12)

1. Kiyevskaya oblastnaya bol'nitsa.
(EXERCISE THERAPY)(CONTRACTURE)

LISOVSKAYA, Z. YE.

20125 LISOVSKAYA, Z. YE. O lechenii embrional'noy maz'yu nekotorykh khronicheskikh vospalitel'nykh protsessov pryamoy kishki. Vracheb. delo, 1949, No. 6, stb. 501-04.

SO: LETOPIS ZHURNAL STATEY, Vol. 27, Moskva, 1949.

SIMONOV, V.K.; RUDENKO, I.N.; ROSTOVITSEV, S.T.; LISOVSKIY, A.F.

Reduction of fluxed sinter by soot carbon in a flow of nitrogen,
carbon monoxide and their mixtures. Izv.vys.ucheb.zav.; Chern.met.
8 no.6:16-21 '65. (MIRA 18:8)

1. Dnepropetrovskiy metallurgicheskiy institut.

LISOVSKIY, A.I.; GVINDOZHILIYA, V.I. (Rybinsk)

Case of plasmocytoma of the lung. Khirurgiia no.8:129-130
Ag '62.

(MIRA 15:8)

(LUNGS---TUMORS)

LISOVSKIY, A.I. (Rybinsk, Yaroslavskaya oblast', Bazarnaya ul. 45, kv.8)

Twenty three cases of heart injury. Vest khir. 92 no.4:82-85
Ap '64 (MIRA 18:1)

1. Iz khirurgicheskogo otdeleniya (zav. - T.M. Volkova)
bol'nitsy imeni N.I. Pirogova (glavnyy vrach - zasluzhennyy
vrach RSFSR A.I. Lisovskiy), g. Rybinsk.

Л. С. ЛISOVSKIY, A.S., inzh.

Comparison of existing methods for calculating the strength of
unit-cast frames for electric locomotive trucks, Trudy MIIT
no.96:99-110 '57. (MIRA 11:1)
(Electric locomotives)

LISOVSKIY, A. S.: Master Tech Sci (diss) -- "The stressed state of the truck chassis on an eight-axle electric locomotive under static load". Tomsk, 1958. 15 pp (Min Transportation USSR, Moscow Order of Lenin and Order of Labor Red Banner Inst of Railroad Transport Engineers im I. V. Stalin), 200 copies (KL, No 2, 1959, 122)

LISOVSKIY, A.S. inzhener

Pure bend of thin-walled sharply curved bars. Trudy TEIIZHT 25:149-
181 '58.

(MIRA 13:10)

(Flexure)

(Elastic rods and wires)

LISOVSKIY, A.S., inzh. (g.Tomsk)

Operational experience with cast-solid frames of articulated trucks used in N8 electric locomotives. Elek.1 topl.tiaga 3
no.5:16-17 My '59. (MIRA 12:9)
(Electric locomotives)

S/124/61/000/003/025/028
A005/A105

10 9100

AUTHOR: Lisovskiy, A. S.

TITLE: On the problem of the calculation of thin-walled beams of large curvature at pure bending

PERIODICAL: Referativnyy zhurnal, Mekhanika, no. 3, 1961, 32, abstract 3V254 (Sb. nauchn. tr. Tomskiy elektromekhan. in-t inzh. zh.-d. transp., 1959, v. 28, 124-133)

TEXT: The author expounds the results obtained in his previous work (Sb. nauchn. tr. Tomskiy elektromekhan. in-t inzh. zh.-d. transp., 1958, v. 25, 149-181 - RZhMekh, 1960, no. 10, 13749), and shows the analogy between the derived formulae for the thin-walled beam and the conventional calculation formulae of the stress analysis. /c

V. Fedos'yev

[Abstractor's note: Complete translation]

Card 1/1

10.9100

S/124/61/000/003/024/028
A005/A105

AUTHOR: Lisovskiy, A. S.

TITLE: The applicability range of the bending calculation formulae of thin-walled beams of small and large curvature

PERIODICAL: Referativnyy zhurnal, Mekhanika, no. 3, 1961, 32, abstract 3V253 (Sb. nauchn. tr. Tomskiy elektromekhan. in-t inzh. zh.-d. transp., 1959, vol. 28, 150-161)

TEXT: The application of the conventional calculation formulae of a straightlined beam to the case of bending of a beam of large curvature is limited, as is well known, by the ratio of the height of cross section and radius of curvature of the beam. For thin-walled curved beams, the application of the calculation formulae of the straight-lined beam is determined not only by the mentioned ratio but also by additional parameters. The numerical calculations for some values of the dimensionless parameters are presented, and the applicability of the simplified calculation formulae is concluded.

V. Feodos'yev

✓c

[Abstractor's note: Complete translation]

Card 1/1

LISOVSKIY, A.S.

Design of thick-walled curved sections. Trudy TEIZHT 34865-
69 '62. (MIRA 16:8)

LISOVSKIY, A.S.; TSUKANOV, T.T.; BORODAVKIN, M.A.; ZAZHIRKO, V.N.;
LISUNOV, V.N.; SOLONENKO, G.I.

Remote control of dump car unloading from the operator's
cab of electric locomotives. Trudy TEIIZHT 34:145-151 '62.
(MIRA 16:8)

LISOVSKIY, A.S.

Radial stresses in curved beams. Trudy OMIIT 98:83-91 1962.
(MIRA 18:8)

LISOVSKIY, A.S.; CKISHEV, V.Y.

Methodology for the design of some side frame units of a freight
car truck. Trudy OMIIT 38:95-103 '62.

(MIRA 18:8)

INDONESIA, A.S.; DAMIRNO, V.S.; LIDONOV, V.H.

the list of the military-industrial system of dump data.
(MIRA 18:8)

MEDEL', Vladimir Borisovich. Primal uchastiye GRIGOR'YEV, Ye.T.,
inzh.; PAKHOMOV, M.P., doktor tekhn. nauk, retsenzent;
BOGDANOV, V.P., kand. tekhn.nauk, retsenzent; LISOVSKIY,
A.S., kand. tekhn. nauk; KROVORUCHKO, N.M., inzh., red.;
VOROTNIKOVA, L.F., tekhn. red.

[Design of the mechanical part of electric rolling stock]
Proektirovanie mekhanicheskoi chasti elektropodvizhnogo
sostava. Moskva, Transzheldorizdat, 1963. 422 p.

(MIRA 16:10)

(Electric railroads--Rolling stock)

LISOVSKIY, A.S., kand. tekhn. nauk, dotsent

Using the analogy method in solving the problem of plane bending of a low-curvature thin-walled bar. Izv. vys. ucheb. zav.; mashinostr. no.9:27-38 '63. (MIRA 17:3)

1. Omskiy institut inzhenerov zheleznodorozhnogo transporta.

GUKHMAN, L.A.; LISOVSKIY, A.Ye.; SHLYAKHOVSKIY, I.D.

Obtaining ashless coke and bitumen for the varnish and paint industry from the furfural extract from the refining of lubricating oil. Izv.vys.ucheb.zav.; neft' i gaz 4 no.7:79-80 '61.
(MIRA 14:10)

1. Azerbaydzhanskiy institut nefti i khimii im. M.Azizbekova.
(Petroleum coke) (Bitumen) (Paint materials)

GUKHMAN, L.A.; LISOVSKIY, A.Ye.

Petroleum-products solidification. Izv. vys. ucheb. zav.; neft' i
gaz 6 no.10:59-62 '63. (MIRA 17:3)

1. Azerbaydzhanskiy institut nefti i khimii im. M.Azizbekova.

GUKHMAN, L.A.; LISOVSKIY, A. Ye.

Concerning the effect of tars on the solidification point of
petroleum products. Izv. vys. ucheb. zav.; neft' i gaz 7
no.12:49-52 '64 (MIRA 18:2)

1. Azerbaydzhanskiy institut nefti i khimii im. M. Azizbekova.

GUKHMAN, L.A.; LISOVSKIY, A.Ye.

Effect of resins on the solidification point of oil products.
Izv. vys. ucheb. zav.; neft' i gaz 7 no.10:67-69 '64.

(MIRA 18:2)

1. Azerbaydzhanskiy institut nefti i khimii im. M. Azizbekova.

LISOVSKIY, A.Ye.; KARTININ, B.N.; GUKHMAN, L.A.; CHERNOZHUKOV, N.I.

Mechanism of the action of tars on the crystallization of paraffins.
Izv. vys. ucheb. zav.; neft' i gaz 8 no.6:57-61 '65. (MIRA 18:7)

1. Azerbaydzhanskiy institut nefti i khimii im. M.Azizbekova i
Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti
im akademika I.M.Gubkina.

LISOVSKIY, B.K.; VANCHURIN, D.Ya.; IVANOV, V.N.

Operative planning of material and technical supplies in terms
of conventional units. Der. prom. 14 no.1:18-22 Ja '65.
(MIRA 18:4)

LISOVSKIY, D. I.

Control of pyrometallurgical processes in non-ferrous metallurgy: textbook for higher technical schools Moskva, Glav. red. lit-ry po tsvetnoi metallurgii, 1938. (Mic 53-285)
Collation of the original as determined from the film: 311 p.

PROCESSES AND PROPERTIES INDEX

9

CA
 Agglomeration and shaft lead smelting in the Ridder plant. The material and heat balances of smelting. V. A. Vanyukov and D. L. Lavashkin. *Yubileyny Shornik Trudov Kafedry i Zolota* 1939, No. 7, 23-35; *Khim. Referat. Zhur.* 1940, No. 1, 97.—Normal melts of the Ridder plant concentrates and mixts. of the Ridder and Zyryan concentrates (1:1), contg. 12.3% of Pb, were smelted. Extr. of Cu into the mat was 46.4%, into waste slag 13.4% and into the raw Pb 23.2%. The introduction of dross with 27.25% of Cu and of slags with Ag and Au is not recommended. All Zn is dissolved in the slag. Pb is distributed as follows: 0.03% is carried away with the gases, 4.2% is dissolved in the slag, 2.7% in the mat and 93.07% in the raw Pb. The large losses of heat (27.29%) carried away from the furnace by the slag can be avoided by excluding the slags from the charge and by using initial materials richer in Pb. Analyses of gases indicate the necessity for regulating the combustion processes and for having a better reducing atm. W. R. Henn

METALLURGICAL LITERATURE CLASSIFICATION

148000 7
 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

PROCESSES AND PROPERTIES INDEX

18

SL

Production of aluminum sulfate solutions and of crystalline alums free from iron and silicon from the Zaglikian alunites. V. A. Vanyukov and D. I. Lisovskii. *Yuzhislavskiy Shornik Trudov Kafedry i Tsh. Tsvetnykh Metallov Moskov. Inst. Tsvetnykh Metallov i Zolota* 1939, No. 7, 236-79; *Khim. Referat. Zhur.* 1940, No. 1, 101-2. Lab.-scale and semiplant-scale expts. are reported. For max. soln. transfer of Al_2O_3 and SO_3 from alunite, the alunite must be heated at 450 to 700°, the temp. being inversely proportional to the time of heating. By heating, the Fe of alunite is made insol. in H_2SO_4 . At 550°, the extn. of Fe can be brought to a min., if the sample is kept for a considerable length of time in the furnace. The initial temp. of decompn. of alunite and of Al alums, obtained from alunite, is 585°. Soln. of the thermally decompd. alunites at 650° in 51% H_2SO_4 was found to be the best method. The extn. of Al_2O_3 in this case was 90%. In large-scale expts., continuous heating produced satisfactory results. A rapid method was developed for detg. the Al_2O_3 content in the heated alunite. Heating the alunite agglomerate to 200° for 1.5 hrs. with H_2SO_4 accelerates the filtration process. W. R. H.

METALLURGICAL LITERATURE CLASSIFICATION

MATERIALS INDEX

18

Separation of aluminum oxide from alums and mother liquors obtained from the Zaglilian alunites. V. A. Vayrnkov, D. I. Litovskii, V. Ya. Korolyuk, D. I. Filin and N. P. Kvasikov. *Yubileinyi Sbornik Trudov Kafedry i Lab. Tyazhelykh Metallov Moskov. Inst. Trebnnykh Metallov i Zolots* 1939, No. 7, 279-300; *Khim. Referat. Zhur.* 1940, No. 1, 102.—Thermal and H_2SO_4 treatments of alunite give an $Al_2(SO_4)_3$ soln. with impurities of Na_2SO_4 and cryst. K alum. The object of the exper. was to treat the 1st soln. to obtain Al_2O_3 and Na_2SO_4 , and the alum to obtain Al_2O_3 and K_2SO_4 . The pulverized alums were dehydrated in suspension at a temp. slightly above 400° . The dehydrated alums were decompd. in suspension at $1150-1200^\circ$. The SO_3 content in the decompd. material was 26-8%. The decompd. alums were leached with boiling water. Filtration after leaching is rapid, if the decompd. material is leached in the same form in which it was removed from the oven (in the form of fine, swollen bubbles). After an 8-fold washing with hot water, the residue contained approx. 0.20% of K_2O . On cooling, K_2SO_4 crystals were sepd. from the satd. soln. after filtration. The Al_2O_3 residue was dried. The $Al_2(SO_4)_3$ soln., with Na_2SO_4 impurity, can be dehydrated without transforming it into alum, and decompd. into Al_2O_3 , SO_3 and Na_2SO_4 . Treatment of the semifinished products produces 2 sorts of Al_2O_3 : (1) the pure Al_2O_3 after the decompn. of K alum, and (2) Al_2O_3 with Fe impurities after the decompn. of the $Al_2(SO_4)_3$ soln. First-grade Al_2O_3 can be obtained from the solns. if they are transformed into alums and decompd. A 100% extn. of K_2SO_4 from alunite is obtained. The proposed method permits a complete utilization of the raw material, producing Al_2O_3 , K_2SO_4 , H_2SO_4 , Na_2SO_4 , and $(SiO_2 + Fe_2O_3)$.

W. R. Hanz

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

OPEN MATERIALS INDEX

COMMON ELEMENTS

COMMON VARIABLE INDEX

LISOVSKIY, D. I.

increasing the chemical stability of converter lining. 11
 1. Lisovsky, D. I., K. Berent, *Sovetskoe Stankostroenie*, *Trudovye Mashiny*, *Inst. Mashinostroyeniya*, *Zhurnal* 1953, No. 25, 116-117; *Keterol. Zhurn.*, *1953*, No. 1221. The relationship of stability of magnesia-chrome refractory cast bricks and also high-alumina refractory bricks studied during the melting of the metal in the converter. *1953*, No. 1221. Chromomagnesite bricks were suitable with slag of a dividing steel and Na metal alloys were suitable in terms, approximately 1300°C. The said bricks were sufficiently stable against the corrosive action of Na₂S and Na₂SO₄, despite the great depth of penetration into the brick of Na₂SO₄. The chromite-coated refractories of the system SiO₂-Al₂O₃ possess a much higher chem. stability. The best results are given by the high-alumina refractory of the mullite type, which is stable against the corrosive action of Na₂SO₄ and Na₂S, and it is fully stable against the corrosion of the slag of a dividing steel and Na metal alloys. *Alloys*, *1953*, No. 1221.

LISOVSKIY, D.I.; BELYAKOV, Yu.P.; SHAPIRO, Yu.L.

Thermal efficiency of shaft furnaces in smelting oxidized nickel
ores. TSvet.met.29 no.11:52-59 N '56. (MLRA 10:1)

1. Mintsvetmetzologo.
(Nickel--Metallurgy) (Heat--Transmission)

LISOVSKIY, D. I.

¹⁸ Extraction of nonferrous metals from slags. D. I. Lisovskiy, S. M. Tenkin, and L. L. Cherkov. U.S.S.R. 106,719, July 25, 1957. To ext. Ni, Co, and other metals from slag, the metals are pptd. as mat by addn. of CaS to the molten slag. M. Hosen

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Translation from: Referativnyy zhurnal, Khimiya, 1959, Nr 5, p 107 (USSR)

AUTHOR: Lisovskiy, D.I.

TITLE: The Reducibility of Lower Oxides and the Silicate of Lower Oxides of Cobalt With Carbon Monoxide

PERIODICAL: Sb. nauchn. tr. Mosk. in-t tsvetn. met. i zolota i VNITO tsvetn. metallurgii, 1957, Nr 26, pp 74 - 93

ABSTRACT: As a result of an investigation of cobalt oxides using the thermographic, roentgenographic and chemical analysis methods, it has been established that only two oxides exist: CoO and Co_3O_4 . Co_3O_4 , obtained by two different methods, contains a few percent of excess oxygen, not bound chemically with Co_3O_4 . The excess oxygen content decreases with an increase in temperature over 300°C and at 900°C is zero. At temperatures $> 750^\circ\text{C}$ Co_3O_4 decomposes to CoO (especially vigorously at temperatures of $> 900^\circ\text{C}$). The equilibrium constant of the reaction $\text{CoO} + \text{CO} \rightleftharpoons \text{Co} + \text{CO}_2$ (1), in the temperature range 700 to $1,100^\circ\text{C}$, is expressed by the equation $-\lg K_p = 2,507/T - 0.946$. The heat

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80611
SOV/81-59-5-14947

The Reducibility of Lower Oxides and the Silicate of Lower Oxides of Cobalt With Carbon Monoxide

of reaction (1) is 11,462 cal. For the reaction $\text{CoO} + \text{CO}$ K_p is 5 to 7 times less, than for the reaction $\text{NiO} + \text{CO}$. At 300 to 700°C reaction (1) is accompanied by the reaction of carbon black separation. CO reduces CoO bound to the silicate, at a higher temperature than pure CoO. Based on the fact of the step-wise change of the equilibrium gas composition at 1,100°C in the Co-CO silicate system, the conclusion was drawn that there are two chemical compounds in the system: mono- and bisilicates. The heat of formation of Co silicates from oxides is determined: 18,062 cal for $2\text{CoO} \cdot \text{SiO}_2$ monosilicate and 11,981 cal for $\text{CoO} \cdot \text{SiO}_2$ bisilicate. When CaO is introduced into the charge, Co silicates are more difficult to reduce, which is explained by the formation of ternary silicates and solid solutions in the CaO-SiO₂-CoO system at 1,100°C.

V. Shatskiy

Card 2/2

137-58-4-6561

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 4, p 35 (USSR)

AUTHORS: Lisovskiy, D. I., Kuz'mina, T. P.

TITLE: Kinetics of the Reduction of Free Carbon Monoxide and Carbon Monoxide Chemically Bound in Cobaltous Silicates (Kinetika vosstanovleniya svobodnoy i svyazannoy v silikaty zakisi kopal'ta okis'yu ugleroda)

PERIODICAL: Sb. nauchn. tr. Mosk. in-t tsvetn. met. i zolota i VNITO tsvetn. metallurgii, 1957, Nr 26, pp 94-107

ABSTRACT: The kinetics of the reduction of the oxides and silicates of Co, oxidized Ni ore, and converter slag by synthetic water-jacket gas, are studied. In all these cases except that of converter slag, reduction starts at 700°C and is accelerated by increase of temperature. The process goes most effectively for cobalto-cobaltic oxide at temperatures in excess of 900°C while for cobaltous monosilicate it goes best at 1100°C. The presence of FeO, SiO₂, NiO, and CaO reduces the rate of reduction of cobaltous monosilicate. Converter slag reduces at 900°C, while at 1100°C the process is slowed by the fusion of the slag. The rate of reduction of the slag is in inverse order to

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Kinetics of the Reduction (cont.)

its grain size. The addition of 50% CaO to oxidized Ni ore and converter gas slows the reduction thereof.

L. P.

1. Oxides--Reduction--Kinetics
2. Silicates--Reduction--Kinetics

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Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 10, p 11 (USSR)

AUTHORS: Belyakov, Yu. P., Lisovskiy, D. I.

TITLE: Model Investigation of the Distribution of the Gas Flow in a Shaft Furnace (Issledovaniye na modelyakh raspredeleniya gazovogo potoka v shakhtnoy pechi)

PERIODICAL: Sb. nauchn. tr. Mosk. in-t tsvetn. met. i zolota, 1957, Nr 27, pp 147-162

ABSTRACT: The conditions for application of the theory of similarity to the model testing of the motion of gases are presented. The study was conducted, at first, on a small model of a shaft furnace (1/20th of full size), where 3 sinter fractions, 8-10, 5-8 and 2.5-5 mm, were used, corresponding to 160-200, 100-160 and 50-100 mm. The data obtained were verified on a larger model, in which the cross section of the shaft was 0.425x 0.425 m, and the height 1 m, the inside lining being fireclay 1/2 brick thick. The results showed that the distribution of the gas flows across the cross section of the shaft furnace depends upon the size of the material. An increase in the size of the larger pieces of charge causes a more

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